



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,776	11/26/2003	Daniel J. VanEpps JR.	9314-59	9674

54414 7590 08/11/2006

MYERS BIGEL SIBLEY & SAJOVEC, P.A.
P.O. BOX 37428
RALEIGH, NC 27627

EXAMINER

HANNON, CHRISTIAN A

ART UNIT PAPER NUMBER

2618

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/723,776

Applicant(s)

VANEPPS ET AL.

Examiner

Christian A. Hannon

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4-17, 20-25, 28-32 and 35-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1, 4-5, 7-17, 20-21, 23-25, 28-32 & 35-38 is/are rejected.
- 7) ☒ Claim(s) 6 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/21/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This action is response to applicant's response filed on 6/12/2006. Claims 1, 4-17, 20-25, 28-32, 35-38 are now pending in the present application. **This action is made final.**

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 7, 8, 10, 17, 23-25 & 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Marx et al (US 2006/0014570), hereinafter Marx.

Regarding claims 1, 17, 25 & 32, Marx teaches a method of operating an electronic device, an electronic device and a computer program product for operating an

Art Unit: 2618

electronic device, comprising receiving a noise signal (Page 3, [0032]), generating a sound metric for the noise signal by performing a Fourier transform on the noise signal to obtain a frequency domain representation of the noise signal, wherein the sound metric is a loudness profile (Page 2, [0019], Page 3, [0032; Figure's 1-3), generating an alert signal having a spectral composition based on the sound metric (Page 2, [0019], Page 3, [0032]). Marx teaches that a frequency domain representation of a measured ambient level can be used to alter the loudness of a ring alert of a telephone, the inherent conversion between the time and frequency domains is the Fourier transform.

With respect to claims 7 & 23, Marx teaches the method & device of claims 1 & 17 wherein the sound metric comprises a loudness profile (Page 3, [0032]).

In regards to claim 8, Marx teaches the method of claim 1 further comprising receiving an incoming communication at the electronic device and wherein receiving the noise signal comprises receiving the noise signal responsive to receiving the incoming communication (Page 3, [0032],[0033],[0036]).

Regarding claim 10 & 24, Marx teaches the method & device of claims 1 & 17 wherein the electronic device is a mobile terminal (Page 2, [0030]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 5, 20, 21, 28, 29, 35 & 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marx in view of Boillot et al (2005/0278165), hereinafter Boillot.

With regard to claims 4, 20, 28 & 35, Marx teaches the method of claim 1, and the electronic device of claims 17 & 25, and the computer program product of claim 32, respectively. However Marx fails to teach wherein generating the sound metric further comprises calculating a distribution of sones/bark versus bark for the frequency domain representation of the noise signal using an ISO 532B loudness calculation method and determining an overall loudness for the noise signal and a loudness in at least one critical band for the noise signal based on the distribution of sones/bark versus bark, the loudness profile comprising the overall loudness of the noise signal and the loudness in at least one critical band. Boillot teaches that generating the sound metric further comprises calculating a distribution of sones/bark versus bark for the frequency domain representation of the noise signal using an ISO 532B loudness calculation method (Page 4, [0050]; Figure 4; Boillot), determining an overall loudness for the noise signal and a loudness in at least one critical band for the noise signal based on the distribution of sones/bark versus bark, the loudness profile comprising the overall loudness of the noise signal and the loudness in at least one critical band (Page 3, [0038],[0039]; Figure 18; Boillot). Therefore it would have been obvious to combine the teachings of Boillot into Marx in order to utilize an internationally recognized standard for psychoacoustic perceived loudness. It is further noted that a computer readable storage medium with computer readable program code is obvious in Marx & Boillot.

In regard to claims 5, 21, 29 & 36, Marx and Boillot teach the method of claim 4, and the electronic device of claims 20 and 28, and the computer program product of claim 35, respectively. Boillot further teaches wherein generating the alert signal comprises determining a power value for the alert signal based on the loudness profile for the noise signal (Page 8, [0096]; Boillot), determining a transfer function for an alert signal transmit filter based on the loudness profile for the noise signal and transmitting the alert signal at the power value using the alert signal transmit filter (Page 6, [0073]; Boillot). It is further noted that a computer readable storage medium with computer readable program code is obvious in Marx & Boillot

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marx.

Regarding claim 9 Marx teaches the method of claim 1, further comprising receiving an incoming communication at the electronic device, receiving the noise signal and generating the sound metric for the noise signal and wherein generating the alert signal comprises generating the alert signal having the spectral composition that is based on the sound metric responsive to receiving the incoming communication (Page 3, [0032],[0035]). Marx fails to teach receiving an incoming communication at the electronic device after receiving the noise signal. However Marx puts no limitation on the order of events (Page 3, [0037]) and it would be obvious to calibrate the noise levels prior to receiving a call to have the incoming call be the appropriate loudness for proper communication.

Art Unit: 2618

6. Claims 11, 12, 14, 15, 30, 31, 37 & 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marx in view of Corkum (US 6,134,455).

In regards to claims 11, 30 & 37, Marx teaches a method of operating an electronic device and an electronic device comprising, an alert profile having a spectral composition based on a noise signal sound metric associated with an ambient noise environment (Page 3, [0032]; Marx), receiving a user selection of one of the plurality of alert profiles and generating an alert signal that is based on the selected one of the plurality of alert profiles (Page 3, [0032]; Page 3, [0035]; Marx). However Marx fails to explicitly teach a plurality of alert profiles, although a dynamic environment could be construed as a plurality of alert profiles, the Corkum reference provides this teaching (Column 6, Lines 48-55; Corkum). Therefore it would have been obvious to include multiple alert profiles in Marx in order to offer predefined noise level situations thereby reducing power consumption by computing new amplifier settings. It is further noted that a computer readable storage medium with computer readable program code is obvious in Marx and Corkum.

With respect to claim 14, Marx teaches a method of operating an electronic device, comprising alert profiles having a different spectral composition than other ones of the plurality of alert profiles then receiving a noise signal, selecting one of the plurality of alert profiles responsive to receiving the noise signal and generating an alert signal that is based on the selected one of the plurality of alert profiles (Page 3, [0032]; Page 3, [0035]; Marx). However Marx fails to explicitly teach providing a plurality of alert profiles, although a dynamic environment could be construed as a plurality of alert

Art Unit: 2618

profiles, the Corkum reference provides this teaching (Column 6, Lines 48-55; Corkum). Therefore it would have been obvious to include multiple alert profiles in Marx in order to offer predefined noise level situations thereby reducing power consumption by computing new amplifier settings.

In regards to claims 12 & 15, Marx and Corkum teach the methods of claims 11 & 14, furthermore Corkum teaches wherein generating the alert signal comprises generating the alert signal having a spectral composition that is based on the selected one of the plurality of alert profiles (Column 6, Lines 55-60; Corkum).

Regarding claim 31 & 38, Marx teaches an electronic device comprising a means for generating alert profiles at least one of the plurality of alert profiles having a different spectral composition than other ones of the plurality of alert profiles (Page 3, [0032]; Page 3, [0035]; Marx), means for receiving a noise signal (Page 3, [0032]; Marx), means for selecting one of a plurality of alert profiles responsive to receiving the noise signal and means for generating an alert signal that is based on the selected one of the plurality of alert profiles (Page 3, [0032]; Marx). However Marx fails to explicitly teach providing a plurality of alert profiles, although a dynamic environment could be construed as a plurality of alert profiles, the Corkum reference provides this teaching (Column 6, Lines 48-55; Corkum). Therefore it would have been obvious to include multiple alert profiles in Marx in order to offer predefined noise level situations thereby reducing power consumption by computing new amplifier settings. It is further noted that applicant's amendment of 'previously generated' profiles fails to define over the prior art as Marx teaches that an ambient noise level is fed to the logic portion (Figure 2,

Art Unit: 2618

Item 15) prior to adjusting the equalizer. It is further noted that a computer readable storage medium with computer readable program code is obvious in Marx & Corkum.

7. Claims 13 & 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marx in view of Corkum and further in view of Boillot.

Regarding claims 13 & 16, Marx and Corkum teach the methods of claims 11 & 14, wherein generating the alert signal comprises determining a power value for the alert signal based on the selected one of the plurality of alert profiles for the noise signal (Column 4, Lines 57-60; Corkum), however they both fail to teach in addition that determining a transfer function for an alert signal transmit filter the selected one of the plurality of alert profiles for the noise signal and transmitting the alert signal at the power value using the alert signal transmit value in generating the alert signal. Boillot teaches that determining a transfer function for an alert signal transmit filter the selected one of the plurality of alert profiles for the noise signal and transmitting the alert signal at the power value using the alert signal transmit value in generating the alert signal (Page 6, [0073]; Boillot). It would have been obvious to one of ordinary skill in the art to combine the teachings of Marx and Corkum to include that determining a transfer function for an alert signal transmit filter the selected one of the plurality of alert profiles for the noise signal and transmitting the alert signal at the power value using the alert signal transmit value in generating the alert signal, such as that taught by Boillot, in order to maximize power consumed in outputting the alert tone.

Allowable Subject Matter

8. Claims 6 & 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 6 & 22, Marx and Boillot teach the method of claim 5, and the electronic device of claim 21, however they both fail to teach wherein determining the transfer function for the alert signal transmit filter comprises selecting coefficients for the alert signal transmit filter.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 2618

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian A. Hannon whose telephone number is (571) 272-7385. The examiner can normally be reached on Mon. - Fri. 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Christian A. Hannon
August 2, 2006



QUOCHIEN B. VUONG
PRIMARY EXAMINER

8/7/06